UCRL-MI-119342-1

November 1994

NIF NEWS

THE NATIONAL IGNITION FACILITY NEWSLETTER

National Ignition Facility Key Decision 1

National Ignition Facility Key Decision 1

Introduction

In an address at the Lawrence Livermore National Laboratory (LLNL) on October 21, 1994, Secretary of Energy Hazel O'Leary announced that she had approved Key Decision 1 (KD-1) for the National Ignition Facility (NIF) project. Secretary O'Leary's announcement, which endorses the 192-beam laser's contributions to national and economic security and scientific research, states that "we are strong on national security—note, not on defense—national security; we are strong on science; and we are strong on the industrial competitiveness of the United States."

Department of Energy Secretary Hazel O'Leary announced Key Decision 1 (KD-1) for the National Ignition Facility during an October 21 address at the Lawrence Livermore National Laboratory. Secretary O'Leary also announced that Lawrence Livermore is the preferred site for the NIF project.

KD-1 authorizes the project's transition from conceptual design to engineering design, and means that the Department of Energy (DOE) will request Congress to allocate approximately $55 million in fiscal year 1996 to advance the project's design. The DOE also plans to provide the multilaboratory project, which includes LLNL, Los Alamos National Laboratory, Sandia National Laboratories, and the University of Rochester, with approximately $6 million for fiscal year 1995 activities, which include the following:

- Addressing start-up project management issues.
- Advancing the conceptual design.
- Continuing Congressman Dellums' public assessment process on the NIF's influence on U.S. goals of nonproliferation of nuclear weapons.
- Preparing required National Environmental Policy Act (NEPA) documents.

An approval of line-item funds for the start of fiscal year 1996 will bring about additional activities, including detailed engineering design for siting the NIF and vendor facilitization contracts. The latter will prepare vendors for pilot production runs of optical components using production equipment and methods that will eventually be used for full-scale production.

In the KD-1 ceremony and the associated news interviews, several supporters discussed their views on the NIF. Congressman Bill Baker (R-CA) told the audience: "This is a great day for America and for the Lawrence Livermore Lab community. This decision gives a boost to the Lab's future and helps chart the course for America's technological leadership." *The New York Times* reported that the founder of the Union of Concerned Scientists, Dr. Henry W. Kendall, a Nobel laureate in physics at Massachusetts Institute of Technology, "hailed the decision as key to keeping Livermore alive scientifically and ready to do battle (with problems of global importance)." Dr. Herbert F. York, LLNL's first director and a consultant to the government on the restructuring of the nation's atomic complex, told the *Times:* "This science-based stockpile stewardship is part of the bargain that makes it possible to have a comprehensive test ban. And that itself is a powerful tool for the promotion [of] nonproliferation. So in the net, I think going ahead with NIF is a good way to support further moves in the direction of arms control and disarmament."

Livermore is the Preferred Project Site

During her address, Secretary O'Leary also announced that the Department of Energy considered LLNL's Livermore Site to be the preferred site for the facility because of the resident technical expertise and the existing infrastructure. In a press release after the KD-1 announcement, O'Leary stated that the Lab was the preferred site because "it contains the nation's leading experts in large laser facilities. Livermore has constructed five consecutive versions of the world's largest lasers, including the currently operational Nova."

In an interview with the *San Francisco Chronicle*, Secretary O'Leary said: "I am indicating my clear preference for Livermore, based on their experience working with lasers and their competence in related fields." Although alternative sites will also be considered and no final site selection can legally occur until a record of decision is filed at the end of the NEPA [National Environmental Policy Act] process, naming Livermore as the preferred site allows LLNL to emphasize site-specific design, safety, and environmental analyses.

LLNL is currently finishing a formal proposal for locating the NIF project at its Livermore Site. The document is based on the *National Ignition Facility Site Requirements* prepared by LLNL, Los Alamos National Laboratory, Sandia National Laboratories, and the University of Rochester's Laboratory for Laser Energetics. The proposal addresses the stringent requirements for siting the NIF, such as site, personnel, facility, and environmental considerations, and is expected to be submitted to the DOE in December 1994.

The NIF and Nonproliferation

Congressman Ron Dellums (D-CA) proposed a process between KD-1 and KD-2 (about 2 years from now) that would resolve to the Secretary's satisfaction whether building the NIF would have a positive or a negative effect on the U.S. goals for nonproliferation of nuclear weapons. During her October 21 address at Livermore, Secretary O'Leary stated that she had accepted all of Congressman Dellums' recommendations for fully and publicly assessing the NIF's potential impact on U.S. nonproliferation goals.

In answering the questions of the press at LLNL, Secretary O'Leary stated that the arms control experts she had consulted believe that the NIF "is the undergirding that will lead us to nonproliferation." However, she also stated that she intended to follow Congressman Dellums' suggestions. In an interview with *The New York Times* she said "Frankly, I do not believe this is a threat to nonproliferation. But having heard those concerns raised with great vigor by people I respect, we're going to examine that question more thoroughly."

Details of the Dellums process are still being finalized. The process will allow the public to fully express opinions on nonproliferation topics. The process will also establish a Key Decision 1 Prime (KD-1') sometime before KD-2, at which time the Secretary must be fully satisfied that the project will not contribute to worldwide nuclear weapon proliferation.

LLNL fully supports the Dellums process and has done so since the Congressman suggested the additional public review process to Secretary O'Leary. At the KD-1 announcement ceremony, Lee Halterman, the Congressman's General Counsel, read a prepared statement from the Congressman stating "The Secretary's responsiveness to NGO [nongovernment organization] concerns and her willingness to investigate vigorously the concerns raised about the potential proliferation impacts of the NIF are to be applauded." The Congressman added "I have directed my staff to remain involved with the NGOs and the Department to design, implement, and assess the outcomes of the process upon which the Secretary is now embarking."

Summary

In an article in the San Jose Mercury News under her own byline, Secretary O'Leary restated President Clinton's request to her "to develop alternative means of maintaining confidence in the safety and reliability of the nuclear stockpile, and to refocus much of the talent and resources of the nation's nuclear labs on technologies to curb the spread of nuclear weapons and verify arms control treaties. The National Ignition Facility, a billion-dollar project, would be among the most important means of meeting these goals." She said "The project also would advance our understanding of fusion energy, stellar physics, and cosmology, while spurring world-class industrial capabilities, technologies, and commercial applications in optical instrumentation and laser devices." At her press conference, Secretary O'Leary stated her strong belief that this project has the right balance of objectives and is worth the investment because it addresses four of the five major DOE strategic objectives: national security, energy, science, and economic security. She concluded "While the cost of this project may seem steep to some, the price of second-rate competence in an era of continuing nuclear dangers is too high to contemplate."

Work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.